IN THE ABSTRACT:

Please substitute the following Substitute Abstract for the originally filed Abstract. A marked up copy of the originally filed Abstract is provided on the following page indicating the changes made thereto.

Substitute Abstract

An intake air amount control system for an internal combustion engine, which is capable of ensuring high robustness and improving controllability in intake air amount control, to thereby improve drivability and reduce exhaust emissions. A control system of an internal combustion engine, which variably controls the amount of intake air drawn into cylinders as desired via a variable intake valve actuation assembly includes an ECU 2. The ECU 2 calculates a cylinder intake air amount Gcyl and a target intake air amount Gcyl_cmd based on a controlled object model, a vector θ s of all model parameters of the controlled object model with an identification algorithm, calculates a target auxiliary intake cam phase θ msi_cmd based on the vector θ s with a sliding mode control algorithm, and controls the variable intake valve actuation assembly according to the target auxiliary intake cam phase θ msi_cmd.